

**RECENT POLICY-ORIENTED RESEARCH  
AND CURRENT POLICY ISSUES:  
A CURSORY REVIEW**

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RECENT POLICY-ORIENTED RESEARCH  
AND CURRENT POLICY ISSUES: A CURSORY REVIEW

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I. INTRODUCTION

A good number of policy-oriented studies on Philippine social and economic development have been undertaken in the last five years. Many of these studies have had a profound impact on the policies adopted by the current government under President Corazon C. Aquino.

When the new government took over in February 1986, one of the first tasks that had to be addressed was the preparation of an agenda for economic policy reforms. For this purpose, the Philippine Institute for Development Studies, <sup>1/</sup> or PIDS for short, convened a group of economists and other social scientists and came up with the report (Alburo et al. 1986) entitled "Economic Recovery and Long-run Growth: Agenda for Reforms." This report, also known as the "Yellow Report," drew heavily on the findings of several policy-oriented studies which had been completed or in the process of being completed at the time of its preparation. The Report was first presented to various audiences in Metro Manila and other parts of the country. Subsequently, it

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\*President and Vice-President, respectively, of the Philippine Institute for Development Studies (PIDS). The assistance of Mario C. Feranil and Jennifer P.T. Liguton in the preparation of this paper is gratefully acknowledged.

<sup>1/</sup>  
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was submitted to the President and her Cabinet who decided to adopt the Report's recommendations. The government's official economic agenda entitled "Policy Agenda for People-Powered Development" was largely based on the recommendations of the Yellow Report. In turn, this Policy Agenda provided the policy framework for the Medium-Term Philippine Development Plan, 1987-1992.

On the heels of the Yellow Report was the "Agenda for Action for the Philippine Rural Sector" which was prepared upon the request of the Department of Agriculture. The preparation of the Agenda was spearheaded by the Agricultural Policy and Strategy Team under the combined auspices of PIDS and the University of the Philippines at Los Baños. Like the Yellow Report, the Agenda was presented and discussed in various public fora in the different regions of the country. Moreover, its recommendations became the basis of the strategy for agricultural development which was officially adopted by the Department of Agriculture.

These examples demonstrate how policy-oriented research activities in the Philippines have helped in development planning and policymaking. In fact, the relative ease and dispatch with which the two reports were prepared can be explained by the accumulation over time of policy-oriented research conducted by researchers in PIDS and other research institutions in the country. This paper attempts to provide an overview of the policy-oriented research on Philippine development completed in the last five years, i.e., from 1983 to 1988. Where relevant and helpful, a few studies completed earlier are mentioned in passing. The paper also identifies and discusses current and emerging policy issues in the country which need to be addressed by the research community in the next few years.

This review is by no means comprehensive or intensive. Not all studies listed in the bibliography are cited in the text, while others may have been simply missed. To facilitate the review, the studies are grouped into those dealing with the 1983-1984 economic crisis and those looking specifically into: (1) Trade and Industrial Policies; (2) Agricultural Policies; (3) Natural Resources and Environmental Management; (4) Financial Policies; (5) Energy; (6) Rural, Urban, and Regional Development; (7) Poverty and Equity; (8) Population and Human Resource Development; and (9) Macroeconometric Modelling.

## II. REVIEW OF POLICY-ORIENTED RESEARCH

### A. Studies Dealing With the 1983-1984 Economic Crisis

There were a number of studies which examined the roots of the 1983-1984 economic crisis in the Philippines and which cut across many policy areas in the process. Among these were: (1) The University of the Philippines School of Economics' "White Paper" (Canlas et al. 1984) entitled "An Analysis of the Philippine Economic Crisis: A Workshop Report;" (2) the PIDS paper (Lamberte et al. 1985) entitled "Review and Appraisal of Government Monetary and Fiscal Policy Response to the 1983-1984 Balance-of-Payments Crisis;" (3) Mangahas et al. (1986), "Foreign Debt, Balance of Payments and the Economic Crisis of the Philippines in 1983-84;" and (4) Montes (1987), "Macroeconomic Adjustment in the Philippines, 1983-1985."

No review of research done in the country in recent years would be complete if the University of the Philippines School of Economics' (UPSE) "White Paper" is not mentioned. Written at a time when the political atmosphere was not exactly conducive to producing critiques of government policies and programs, the White Paper succeeded not only in putting together a comprehensive and analytical account of the economic crisis but also in making the public realize the importance of objective, well-researched studies as inputs to national decisionmaking. A major conclusion of the paper was that, while external difficulties were a cause of the 1983-85 economic crisis, the major reason for the difficulties rested with the character of economic policies adopted and of policymaking by the political leadership then. The tragic political events that followed "simply tore the already weakened fabric of the economy."

The study written by a group of economists based at PIDS took a look at the crisis from a different perspective. The study attempted to document and critically evaluate the various stabilization measures adopted by government in response to the crisis and the impact of such response on various concerns such as growth, employment and inflation. The verdict was that the stabilization measures taken by the government in response to the crisis was in the nature of an overdose and even wrong medicine in certain instances, resulting in negative growth, massive unemployment and unprecedented inflation rate.

The Mangahas et al. study provides an objective account of the Philippine macroeconomic experience leading to the crisis, and pays special attention to the relationships between external shocks and domestic policy responses. With the aid of a simple forecasting model, the paper also assesses the country's medium-term growth prospects in the light of the austerity measures being adopted to revolve the crisis. By and large, the conclusions parallel those of the White Paper and the PIDS study

cited above. Lastly, Montes' study analyzed the adjustment program carried out in response to the 1983-84 balance-of-payments crisis. It points out that actual adjustment was achieved through a sharp fall in imports mainly in industrial goods and capital goods. Thus, a current account surplus was attained inspite of the poor export performance. The cost of adjustment fell heavily on labor. It concludes that a monetarist program that works through the constriction of credit has a very poor chance of inducing a real adjustment because of the very fact that it kills off investment. Having applied a monetarist adjustment program, the Philippine economy cannot expect a bright prospect in the second half of the 1980s.

#### B. Trade and Industrial Policies

The area of trade and industrial policies has been one of the main subjects of research in the Philippines. In fact, the first major output of PIDS was a comprehensive study on trade and industrial promotion policies in the Philippines by Bautista, Power and Associates (1979). The study had a major impact on policymaking, foremost of which was the implementation of the 1981-1985 Tariff Reform and Import Liberalization Program. There were subsequent studies which dealt with more specific topics. Tecson (1986) analyzed the export markets for Philippine agriculture and labor-intensive industries. She noted a marked increase in the share of nontraditional, labor-intensive products in total exports over the past ten years, as well as a growing market diversification. Similar observations were noted by Alburo (1985) and Guinogundo (1987). Medalla and Tecson (1988) investigated the types, scope of application, and possible effects of trade barriers deployed against Philippine exports. Their major conclusion was that the top eight Philippine exports (mainly agricultural and agro-based manufactured products to the US, Japan, and EEC) had high NTM-coverage, whereas in the ASEAN countries, NTM-coverage of Philippine exports was relatively low. The direct impact of the GSP on Philippine exports was examined by Molina (1983). The empirical results suggest that total GSP exports of manufactures to the US, Japan, and EEC, in general, performed better than did non-GSP exports.

Vigo (1987) studied the recent performance of export processing zones (EPZs). The performance of EPZs has not been promising: their occupancy rate has been very low and their linkages with local industry have been very weak.

A comprehensive study on manufactured exports from the Philippines was done by Ali (1988). Aside from looking into the impact of macro and sectoral policies on exports, the study also examined the institutional environment and support systems such as export financing schemes. Ali recommended, among others, the modernization of export financing schemes, the strengthening of institutions established to support exporters, and the automatic access of export bills to the Central Bank rediscounting window.

The structure and causes of manufacturing sector protection in the Philippines were thoroughly analyzed by Tan (1986). Her estimates of effective protection rates (EPRs) suggest that trade and industrial policies adopted by the Philippines were basically inward looking, i.e., heavily protecting final consumer products and generally penalizing exports. Medalla (1985) empirically showed that resources flow from industries with low EPRs to industries with high EPRs. More specifically, highly protected industries tended to increase their capital intensity. The main conclusion emerging from these studies is that the structure of protection in the Philippines has led to an inefficient allocation of resources, thereby retarding overall economic growth.

Studies evaluating the ongoing trade reform program (TRP) were conducted mostly by the PIDS-Tariff Commission research team. Most of these studies examined the impact of the TRP on various industries, namely, textiles (Mercado 1986), pulp and paper (Pineda 1986), flour and flour based products (Mirabueno 1986), home appliances (Tan 1986), cotton (Pineda 1987), livestock (Pineda 1987), rubber tires (Tan 1987), flat glass (del Rosario 1987), resin and plastic products (Tan 1987), and iron and steel (del Rosario 1987). The findings and recommendations vary by industry. In the case of livestock, for instance, the study indicates negative protection and therefore recommends the removal of penalty on the sector. With respect to flat glass, the study points out that the scheduling of import liberalization will be crucial to the industry given current levels of production.

The other studies on trade liberalization deal with (1) methodologies for measuring protection and comparative advantage (Medalla and Power 1987) and the effects of the tariff reform program (Mabida 1987); (2) the documentation of import licensing procedures (Seligman 1987); (3) a survey on dumping and countervailable subsidies (Seligman 1987); (4) a recalculation of effective protection rates to include nontariff measures (de Dios 1987); and (5) agricultural tariff and tariff measures (Seligman 1987). Medalla and Power (1984) discussed methodologies in estimating the shadow exchange rate, the shadow wage rate, and the social rate of discount for the Philippines.

Alburo and Shepherd (1986) examined the timing and sequencing of trade liberalization policies in the Philippines. They identified three liberalization episodes, namely: (1) Foreign Exchange Decontrol: 1960-65; (2) Devaluation and the Growth of Nontraditional Exports: 1970-80; and (3) the Tariff Reform Program: 1981-85. They concluded that the Philippines does not seem to have a long-term commitment to trade liberalization, although, in an "ex post" sense, it appears to observe the classic sequence of (1) replacing quantitative restrictions by tariffs (stage A); (2) promoting manufactured exports (stage B); and then (3) liberalizing the manufacturing import-substitution sector (stage C).

Studies on market concentration in the Philippines have yielded more insights on the industrial structure of the Philippines. De Dios (1986) found that the pattern of tariff protection in the past contributed to the oligopolistic structure of Philippine manufacturing and that there was a significant degree of association between those sectors which were characterized by heavy seller concentration and those in which foreign capital found a hospitable niche. Hill (1984) confirmed this latter finding. Patalinghug (1983) analyzed the degree of concentration in specific Philippine industries, namely, food, home appliance, and textile utilizing the 4-digit level of aggregation. The findings suggest a high degree of market concentration in these industries.

The government has been encouraging industries to locate outside of Metro Manila through some policy measures, such as investment incentives, industrial ban from Metro Manila, etc. Medalla (1983) and Pernia, Paderanga, Hermoso and Associates (1983) tried to explain why the industry dispersal program of the government failed. More recently, Herrin and Pernia (1987) examined the factors that determine firms' choice of current and future location. One significant finding was that direct government interventions are generally not considered by firms as either decisive or of major importance in location choice. As to future location decisions, only a "government ban" was considered highly important by a majority of firms.

Hooley (1985) studied productivity growth in Philippine manufacturing from 1957 to 1980. He found that total factor productivity (TFP) growth in the manufacturing generally had been declining. He also noted a considerable dispersion in productivity performance among industries. He further examined the factors determining intra-industry productivity change. His findings indicate that tariff protection was negatively associated and export expansion positively associated with superior TFP performance.

Hardly any attention has been given in the literature to direct foreign investment (DFI) in the Philippine manufacturing sector. During the past five years, only two rigorous studies on DFI were made. One focused on the Australian direct investment in Philippine manufacturing (Hill 1984) while the other one dwelt on Japanese investments (Alburo 1983). Among the major findings of Hill's study were: (1) two-thirds of Australian firms included in the survey were mainly oriented towards the domestic market; (2) low cost of labor emerged as the most important factor in the decision to invest; and (3) most Australian firms were located in relatively labor-intensive industries. On the other hand, Alburo noted that Japanese investments went into relatively high "tech" industries. In contrast to Australian investment in the Philippines, Japanese investments had a higher share in total DFI.



There is a vast literature on small-scale industries (for example, see Cenzon et al. 1986; Guanzon 1985; and Salazar et al. 1986). Most of these studies examined the viability of small-scale enterprises - their location, impact on employment, markets, technology, institutional support provided by government, and industrial and financial policies affecting the growth of small scale enterprises. Fabella (1988) analyzed the impact of recent economic liberalization initiatives on small- and medium-scale establishments. He concluded that these industries largely benefited from such initiatives as indicated by the improvement or nondeterioration in their EPRs.

### C. Agricultural Policies

The literature on agricultural policies has grown considerably since the early 1980s and rightly so inasmuch as the agricultural sector absorbs about one-half of total employment and accounts for about 30 percent of GDP.

Over the years, a change in the emphasis of research in agriculture has become discernible. Before 1980, most studies dealt with specific commodities with less focus on policy issues. Since the beginning of the 1980s, however, there has been a growing interest in the impact of macroeconomic policies on the performance of the agricultural sector and its subsectors. These studies include those by Unnevehr and Balisacan (1983) on the rice industry; Rodriguez and Rodriguez (1983) on the corn industry; Clarete and Roumasset (1983) on the sugar industry; Balisacan (1983) on the cotton industry; Cabanilla (1983) on the livestock industry; and Power and Tumaneng (1983) on forestry. Policies on fertilizer and farm mechanization were examined by David and Balisacan (1983) and David (1983), respectively. In addition, Roumasset (1983) studied price stabilization policies in the Philippines, while de Leon (1983) examined government expenditures and agricultural policies. The major findings of these studies were synthesized and integrated by David (1983). The overall conclusion that emerges from the various studies is that, despite the strong economic potential in agriculture as evidenced by its credible performance under trying circumstances, government policies have nonetheless been generally biased against the growth and productivity of the agricultural sector vis-à-vis the industrial sector. The significance of this set of studies may be judged from the fact that most of the policy recommendations were used in the subsequent restructuring of the country's agricultural sector.

The same concerns were echoed in Intal (1985) and Intal, David, and Nelson (1985) which reviewed the macro price environment (i.e., prices of capital and foreign exchange) and the government's role in agricultural development under the new policy environment. Bautista (1985a) also examined the effects of trade and exchange rate policies on export production incentives in Philippine agriculture. The bias against

agricultural exports vis-à-vis industrial exports which received fiscal and financial incentives continued even during the 1970s when an outward-looking development strategy was being promoted by the government. In another study, Bautista (1985b) showed that there was a social loss, in terms of lower agricultural income, associated with the domestic underpricing of food and export crops and the overvaluation of the peso in the 1970s.

Investments in infrastructure, technology, research and extension programs, and the agrarian reform program could have significant effects on output supply and input demand in agriculture. This issue was examined by Evenson (1986). He found, among others, that in the case of the Philippines, roads have a substantial impact on input use and output in agriculture. Rural electrification induces input use but does not have a positive effect on output. The technology variables show a positive impact on net profits. Interestingly, land reform has only a small impact on farm productivity and net profits.

Aside from the studies mentioned above, there were several studies that added more insight into the impact of policies on specific subsectors and concerns in agriculture. Among these were Habito (1985), Adriano (1984), Ofreneo (1983), Rivera (1983), Valmayor (1985), Mangahas (1985), Quisumbing (1985), Ledesma (1983), and Cruz (1984). These studies were used as inputs to the preparation of the report: "Agenda for Action for the Philippine Rural Sector" (1986). Most of the recommendations contained in this report (e.g., removal of export taxes for agricultural products, dismantling of monopolistic trading arrangements for both agricultural outputs and inputs, etc.) have been adopted by the government.

The arguments for adjusting macroeconomic policies impinging on the agricultural sector have been further strengthened by the results of the study by Rosegrant, Gonzales, Bouis and Sison (1987). Using a policy impact model, they were able to quantitatively analyze the impact of alternative policy scenarios. For example, a devaluation of the peso by 20-25 percent would significantly improve the competitiveness of rice and corn production. They strongly argued against subsidizing fertilizer and other agricultural inputs and suggested the need to stabilize rice and corn prices moderately above currently depressed world prices in the short term. The latter was also the subject of the study by Ali (1987). Like Evenson (1986) and Balisacan (1988), they recommended the provision of more rural infrastructure, agricultural support services and better production technology.

The introduction of new technology in agriculture, especially in the rice sector, is well known and the effect of such technology on agricultural productivity has been widely studied. On another aspect, Bailey (1985) examined the price responsiveness of palay hectareage before and during the modern

varieties period. His findings indicate that rice farmers are as price responsive and, in some cases, even more price responsive in the latter period than in the former.

The experience with modern technology demonstrates the necessity of increasing investments in R & D. However, there is also a need to examine the allocation of R & D investments. In the past, investments in research went into the development of technologies well suited to favorable areas. For example, modern, high-yielding varieties have been more suited to irrigated conditions than to unirrigated conditions. Thus, farmers in unirrigated areas which have been bypassed by the new technology could become worse off. Further, the classic trade-off between growth and equity clearly emerges. This is the issue addressed by David and Otsuka (1987), Mandac and Flinn (1987), Orden (1987) and Bautista (1987).

Evenson and Sardido (1986) investigated the productivity changes in agriculture. In particular, they estimated crop productivity changes, labor productivity changes, and total factor productivity changes from 1950 to 1984. In general, the results were encouraging especially in the 1970s when total factor productivity growth and labor productivity growth were exceptional. Results also showed that in terms of productivity changes, other crops, such as fruits, vegetables and corn, outperformed rice. They further provided regional productivity estimates and the results indicate marked differences in agricultural productivity performance by region.

In the case of agrarian reform, the loss of economies of scale is often cited as the strongest argument against land reform. This is not the case, however, in the production of tree crops such as coconuts, coffee and cacao (Hayami, Quisumbing and Adriano 1987). In the case of sugar, Habito (1987) showed that small farms incurred the least cost to produce per picul of sugar. With the passage of the Comprehensive Agrarian Reform Law (CARL), attention has shifted towards raising funds to finance the implementation of the CARL. The bankers' concerns regarding the CARL are well known (Bankers' Reaction 1987). They range from coverage (e.g., livestock, foreclosed or mortgaged lands) to land valuation.

Garcia (1984) looked into foreign investments in Philippine agriculture. She pointed out that incentives to foreign investments were quite attractive, contributing to the substantial foreign investments in export crops such as coconut, sugar, banana, and pineapple, and in the intermediate processing of these products.

While policies to promote the development of the agricultural sector are needed, policies addressing the development of the non-agricultural sector in the rural areas must be considered as well. The non-agricultural sector has

become an increasingly important subsector in Philippine rural areas (Angeles 1987). A strong rural economy needs closer linkages between agricultural and non-agricultural activities. There is now a growing interest in studying rural linkages (Ranis and Stewart 1987; Ranis, Stewart and Reyes 1989; and Bautista 1988). Available evidence examined by Ranis, Stewart and Reyes showed that the strongest linkage with agricultural growth is with the consumer goods industries in rural areas of the Philippines.

#### D. Natural Resources and Environmental Management

As concern over the continuing depletion of natural resources and its effects on the environment is felt all over the world, the need for policies and research that address some of the more pressing issues in this area becomes more pronounced. In the Philippines, such concern was already evident even in the 1960s and became even more marked in the 1970s and 1980s as the pressure of the ever-growing population continued to push the limits of the country's natural resources.

The area of natural resources and environmental management embraces the following concerns: (a) forestry and forest resources management, including upland communities; (b) fisheries; (c) minerals and mineral conservation; and (d) environmental management.

##### 1. Forest Resources Management

Over the years, a number of studies have dealt with various issues affecting forest resources management. Cruz (1985), in a summary of the papers and proceedings of a seminar-workshop on economic policies for forest resources management, offered a framework for research for forest resources management. The framework defined the sub-sectors within forestry and attempted to put into a development perspective the policies and issues that may be raised in evaluating the condition of Philippine forestry. In contrast to the traditional concentration of previous studies of the forest sector on the significance of forest products in international trade and on forest management as it relates to the regulation of commercial logging concerns, Cruz's approach went beyond by incorporating other aspects of the forest sector, specifically the multiple use/user of forest resources and the crucial implications of forest management for economic activities external to the sector.

The economic significance of forestry cannot be understated. Power and Tumaneng (1983) estimated that the combined output of forestry products had constituted about five percent of the country's net domestic product over the past 30 years. Evaluating the comparative advantage of the forest industry, they concluded that forestry offers an opportunity for the country to have an additional efficient means of earning and saving foreign

exchange in the area of trade. They also suggested that efforts should focus on the promotion of domestic processing of wood, together with reforestation and forest protection, to enhance the sector's long-run capacity to earn and save foreign exchange. However, they cautioned that government price intervention and other policies may turn a socially advantageous activity into a privately unattractive one, and vice versa. The policies evaluated in their study included not only those specific to the forestry sector (e.g., export tax or export ban on logs) but also macro policies such as the tariff system and exchange rate policy, and their significant effects on tradable forest products.

By also adopting a macro approach in analyzing the impact of government policy on forest resource utilization, Nelson (1984) looked into the effects of national policy on forest management. From the set of forest management policies he studied, Nelson found two forest management policies having either positive or ambiguous effects on resource depletion. These are: (a) the investment incentives to wood processing; and (b) the social forestry program. And because the sources of depletion in the forestry sector -- logging (primarily for the export market) and informal use (for construction, fuel and conversion to agriculture) -- have reached the level of overexploitation, two additional concerns have gained prominence, i.e., the need for a reduction in environmental degradation especially as this affects erosion and sedimentation, and the improvement of the welfare of upland communities.

Segura-delos Angeles' seminar paper (1984a) on the economic analysis of resource conservation by upland farmers in the Philippines and her study on upland economics and economic impact analysis (1984b); David's study (1984) on the environmental effects of watershed modifications; Galvez's paper (1984) on the management and cost of watershed reforestation with specific reference to the Pantabangan and Magat cases; Cruz's study (1984) on population pressure, migration and markets with implications for upland development; and Capistrano and Fujisaka's paper (1984) on tenure technology and productivity of agro-forestry schemes, all attempted to address such additional concerns.

More specifically for the upland dwellers (mostly composed either of migrants from the lowlands or of tribal minorities), the studies looked into possible approaches towards creating institutional arrangements whereby they can utilize forest resources while at the same time contributing to their sustenance. The so-called "social forestry" approach envisioned in the studies approximates such a twin-pronged strategy. Meanwhile, the studies focusing on watershed management emphasized the fact that forest resources, apart from being a source of timber, also play a critical role in watershed protection. Hence, it is important that logging activities which primarily contribute to depletion be rationalized, or for intensive reforestation to take place.

One of the policy concerns that need to be continuously addressed in commercial forestry would thus have to do with cutting charges and licensing. It should be emphasized that no amount of reforestation will succeed unless illegal logging operations or overcutting (or better yet both) is stopped. In this regard, schemes like the selective logging system (addressed by Cruz 1984 and by Segura-delos Angeles 1984) need to be regularly reviewed.

Revilla's study (1984) on forest land management in the context of national land use provides a broader context in the analysis of forest land management. The study discussed the general issues of land use management and multiple use forestry as well as the implications of the relatively new People's Forest Program. It also highlighted the close relationship between multiple forestry management and land allocation. According to the study, the three major services or outputs from forests are: (a) production -- wood, fiber, food; (b) protection -- floods, droughts, siltation, etc.; and (c) provision of recreational amenities. All these outputs are sustainable as long as they are properly managed over time. Hence, foremost in the land management process are the classification of land all over the country and the allocation of land into various uses based on identified objectives.

## 2. Fisheries

Philippine fisheries are classified into three major components, namely: (a) municipal coastal fisheries, (b) commercial fisheries, and (c) aquaculture. The contribution of each of these components in total fisheries production as well as an overview of the value of production of each of these three, is presented in the chapter on fisheries in the Agricultural Policy and Strategy Team's Agenda for Action for the Philippine Rural Sector (1986) and in Librero's survey (1988) of the fishing industry in the Philippines.

In view of the significance of municipal coastal fisheries, issues affecting this sector must be properly addressed. For one, this sector is the most problematic with respect to equity considerations since both municipal and commercial fishing units compete for these resources. Cruz (1988) reported that recent studies concluded that Philippine marine resources, especially in those municipal coastal areas, were overfished and that the annual catch had already started to decline. He cited the growing population pressure on limited resources caused by the lack of opportunities in industry and lowland agriculture, together with the lack of effective and equitable tenurial policies to address the problem of access to resources and claims to the benefits from resource use, as an additional burden. Hence, to address this problem, Cruz emphasized the need to promote resource conservation efforts and recommended a decentralized management scheme and resource taxation for coastal

fisheries. The scheme calls for the control of access to resources through the assignment of fishing rights as well as the setting up of local groups to regulate and enforce the rules.

The application of a decentralized management approach for municipal fisheries may be appreciated in light of the experience of San Miguel Bay, a coastal fishery in Camarines Sur province (Smith and Mines 1983). To address the twin problems of overexploitation and growing interdependence (and conflict) among resource users in the area, it was deemed necessary to adopt (1) a program of fishery management that required a system of effort-reduction; (2) taxation of any resource rent that was not appropriated by the small-scale sector; and (3) a common property approach to changing rules on or institutions governing the access and management of the resource.

In contrast to the issue in municipal fisheries of sustaining and improving the distribution of a level of catch that has in all likelihood reached the biological limits of fishery, the major concern of government in commercial fishery has been the maximization of its growth potential. Fishery resources and the markets in this sub-sector indicate a substantial potential for expanded economic activity. The two most important growth areas are prawns/shrimps and tuna. Sianghao (1986) suggested an agenda for exploiting export marketing opportunities for shrimp and prawns.

Seligman (1988) examined some of the issues in commercial fisheries. Her paper addressed the relationship between protection given by the government and the efficiency enjoyed by the industry. She concluded that, despite the heavy protection received by the sector in the past, it has not developed a strong commercial base. Hence, she suggested that policy and research concerns should look deeply into problems of commercial fishing itself such as seasonality, absence of proper technology in tapping unexploited areas, strengthening of the shipping industry, etc. Librero (1988) also enumerated other problems related to commercial fishing - poaching, competition, fuel costs, dynamite fishing, pollution, etc.

Of late, aquaculture has become increasingly important because of its fast growth, the stability of its outputs, the higher value and export-potential of its product, and its ability to provide much-needed alternative employment in farming communities. The two important sub-sectors in aquaculture fisheries are the fishponds and the lake-based systems.

Milkfish aquaculture dominates land-based aquaculture or fishponds in the Philippines. However, compared with yields in other Asian countries, its total yield in the country may be considered still very low. One explanation may be that fishpond technology is not easily accessible due to the high pond development costs. Studies, therefore, may be geared toward the

promotion of cooperative undertakings and the improvement of the productivity of existing ponds. In this regard, Almira-Ygrubay (1988) tried to examine the existing technologies for fishpond aquaculture and to see which type or combination of technologies was best suited to Philippine conditions. Relatedly, Singh et al. (1980) discussed the rice-fish farming technology as a possible technology for aquaculture but expressed some reservations as to its success in development and dissemination. Meanwhile, a promising trend has been the emphasis on the newer technology of tilapia culture. Guerrero (1985) presented data on the hectareage and average yield/harvest of Philippine tilapia.

The lake fisheries can be the most complex of fishing systems not only because of the complexity of the natural lake biomass but also because of the potential conflict between the lake's two modes of exploiting the fishery resource (Agricultural Policy and Strategy Team 1986). The most notable case is the Laguna Lake problem. Gonzales (1987) examined the economic geography of the resource use conflicts at the lake and found out that the issue had grown into a national controversy. Using time and space analysis, he discovered the existence of three levels of resource use conflicts, namely: (a) intra-sectoral conflicts between fishpens and the traditional fishing villages beginning in the early 1970s when modern fishpen technology was introduced; (b) inter-sectoral conflicts between the fisheries sector of the lake and the agriculture sector in the outlying areas of the lake beginning in the early 1980s due to the adverse effects on fishery of agri-related infrastructures like the Hydraulic Control Structure; and (c) emergent multi-sectoral conflicts among the fisheries, agricultural and household sectors due to the flood-related infrastructures constructed at the river tributaries.

While the most immediate policy solution to the Laguna Lake and other lake-based fisheries is the reduction of fishpens, there must also be efforts to institutionalize limits to the entry of more open fishermen. Research on the necessary institutional changes required to regulate lake fishery is sorely lacking. In this regard, Gonzales (1987) offered some policy options for lake resource management including a change in the approach to the fishpen development program, the formulation of a new Laguna Lake management and development policy, and the reorganization of the Laguna Lake Development Authority's structure.

From the technical change aspect, one promising approach lies in the tilapia aquaculture method which requires less initial investment. Garcia and Medina (1983) looked into the costing of this method in their review of the state of development of cage culture in Laguna de Bay.



### 3. Minerals and Mineral Conservation

In the early 80s, Santos (1982) conducted a survey of research done in the field of Philippine mineral industry, especially in areas touching on mineral economics and policy. However, the materials he reviewed covered only research done up to 1980. Lamenting the rarity of honest-to-goodness research studies in this field, Santos identified a number of research gaps and recommended a whole range of topics for future research. Unfortunately, in the succeeding years, no rigorous research work, especially one with significant policy implications, came about.

### 4. Environmental Management

Studies in the area of environmental management have traditionally been incorporated in the body of research for specific sectors such as forest resource management, fisheries management and mineral conservation. For the forestry sector, studies on watershed protection and reforestation have been the most notable while for the fisheries sector, more research must be directed towards the study of the destructive effects on the environment of techniques such as muro-ami, dynamite fishing, and fish poisoning.

In terms of the economics of public health and environmental sanitation, very few exhaustive studies can be noted. Palaypay's paper (1988), which focuses on a sanitary, efficient and income-generating way of waste disposal is a welcome contribution. Palaypay first gave a descriptive analysis of the health situation in the country especially in the rural areas, then presented various options which the government may consider given the scarce health budget, and finally proposed a material recovery system based on a six-"F" scheme for recycling domestic wastes.

### E. Financial Policies

#### 1. Fiscal Policies

The size of the fiscal deficit as well as the manner in which it is financed lies at the very heart of any stabilization program. Remolona (1985), Manasan (1988) and Gochoco (1988) dealt with these issues. The reliance on deficit-financing resulted in the crowding out of private investment and the escalation of interest rates. However, Gochoco's results suggest that, while a significant "crowding-out" effect exists, it is apparently a short-lived phenomenon. One of the important findings of Manasan is that revenues lag behind expenditures in adjusting to inflation, thereby resulting in a widening of the deficit. Canlas (1986) looked into the impact of debt financing on consumption. His findings support the hypothesis that people take government consumption into consideration, counting it as

part of their overall consumption. Thus, an increase in government consumption spending tends to crowd out private consumption. Arroyo (1987) extended Canlas's study by using more disaggregative data. The study confirmed the findings made earlier by Canlas.

There have been many studies on tax buoyancy and elasticity. Whereas previous studies used highly aggregative data (e.g., Llanto 1985), the more recent ones utilized a more detailed classification of taxes (e.g., Diokno 1986 and Manasan and Querubin 1987). One implication for policy here is that it appears highly inappropriate to look at the various types of taxes as a homogeneous aggregate. A major cause of concern among policymakers has been the finding that buoyancy and elasticity estimates for almost all taxes fell below the critical value of one for the period 1975-1985 and that the performance of the Philippine tax system in generating revenues had deteriorated during the same period.

Studies on tax administration are also numerous. Most of these studies were done by the National Tax Research Center (NTRC) in cooperation with other agencies such as the National Economic and Development Authority (NEDA), the Bureau of Internal Revenue (BIR) and PIDS. Among the issues empirically analyzed by these studies were the tax behavior of Filipinos (NTRC Staff 1986); the extent, forms and causes of tax evasion (Yoingco 1986a); and the efficiency in the enforcement of national internal revenue laws and regulations (Yoingco 1986b). One study specifically examined a sizable number of corporate and individual income tax returns to determine the magnitude, on an industry basis, of business deduction items (Yoingco 1987).

The allocative impact of fiscal incentives has been well studied. Manasan (1986) examined the impact of Board of Investments (BOI) incentives on rate of return, factor prices and relative factor use. The package of incentives was found to have had a substantial impact on the rate of return and labor-capital ratio. Manasan (1988) also reviewed the investment incentives in ASEAN countries. An interesting finding was that ASEAN countries are to a large extent as competitive with each other before incentives as they were after incentives.

In the 1970s and early 1980s, the Philippines saw a rapid increase in both the number and size of public sector enterprises. Initially, studies on this sector grappled with the definition of a public enterprise in order to delineate the scope and size of the sector (Manasan 1984 and Briones 1986). Subsequently, other issues were addressed. Manasan and Buenaventura (1986) studied the number and sectoral distribution of public enterprises, their economic contribution (value-added), and their impact on employment, investment, borrowings and the fiscal budget, and factor productivity; while Amatong and Beltran (1987) and Briones (1986) examined the financial performance of

public enterprises. In general, public enterprises were found to have performed poorly. They have a low labor absorption capacity, high capital intensity, minimal contribution to total output, a very low rate of return, and are largely dependent on government subsidies. Iglesias (1985) and Ancog (1985) evaluated the existing structure and process for coordination and control of selected Philippine public enterprises and proposed some measures that will ensure accountability and responsiveness of these enterprises to national goals and policies. Guina (1985) discussed various approaches to performance evaluation of public enterprises considering their mandates.

An analysis of public sector expenditures for 1975-85 reveals an expanding expenditure program despite inadequate government revenue mobilization (Manasan 1987). As a result, the fiscal deficit proved to be unsustainable. It contributed significantly to the massive foreign debt problem. Moreover, it led to severe reductions in both the public investment program and maintenance expenditures.

An investigation of the sectoral distribution of government expenditures in 1975-88 (Manasan 1988) shows an increase in the share of the social sectors, particularly education, in the last three years relative to the earlier period. However, the same study also indicates that the debt burden eats up so much of the government budget that, despite substantial increments in the government expenditure-GNP ratio, real per capita government expenditures net of debt service have actually declined relative to 1975 levels.

## 2. Monetary Banking and Exchange Rate Policies

The 1980s marked a significant shift in financial policies. Before this period, financial policies tended to be repressive. In particular, cheap credit was promoted and loans were targeted to priority sectors. In addition, banks were allowed to perform only highly specialized functions. The adverse effects of these repressive financial policies on savings mobilization, resource allocation and income distribution are well documented (for example, see Sacay et al. 1985; Llanto and Neri 1985; Lamberte 1985; Tan 1985; Patalinghug 1987; and Tolentino 1988).

The process of financial liberalization began in earnest in 1981 with the deregulation of interest rates and the reduction in the functional distinction among different types of banks. Rediscounting policy shifted towards stabilizing the economy rather than allocating credit to priority sectors. So far, the results of recently introduced financial reforms have been mixed. Financial savings were found to respond well to interest rate deregulation (Lamberte 1987 and Filart 1987). However, the gross spread realized by banks has continued to rise after the interest rate deregulation, suggesting that banks have some degree of oligopoly power. Interestingly, the policy on bank entry and

branching has become more restrictive after the interest rate deregulation (Lamberte and Lim 1987). It seems that partial liberalization produces other inefficiencies. The utter neglect of requirements to successful liberalization efforts has further compounded the problem (Lamberte 1985; Remolona and Lamberte 1986; and Montes 1987).

Other studies have examined areas where further reforms can be introduced. Montes et al. (1985) focused on the positive impact of reducing intermediation taxes (i.e., reserve requirement, gross receipts tax and loan portfolio requirements) on the cost of credit and total output, while Untalan and Cuevas (1988) examined the effect of certain policies on bank transaction costs. Relampagos and Lamberte (1988) pointed out the negative effect of the deposit retention scheme on deposit mobilization and bank profitability. The effectiveness of existing guarantee schemes has been questioned by Magno and Meyer (1988).

Studies on money and inflation became scarce in the 1980s. The latest study was done by Lim (1985). He observed that monetarist models performed badly in explaining inflation in the Philippines compared with structuralist models. Studies on the effectiveness of monetary policies are also scarce. Lamberte (1984) examined the relationship between monetary aggregates and economic activity and controllability of monetary aggregates. Canlas (1986) performed a similar exercise but used the rational expectations hypothesis.

There is now growing interest in studying the informal credit markets (ICMs) and this is not without reason. A significantly large proportion of borrowers do not have access to the formal banking system (Agabin 1988). Most studies examined specific segments of the ICMs such as credit unions (Lamberte and Balbosa 1988), professional moneylenders (Lamberte and Bunda 1988), and traders (Larson 1988; Geron 1988; and Floro 1987). Others focused on specific transactions and instruments such as trade credits (Lamberte and Jose 1988). These studies dealt mainly with the efficiency of ICMs in mobilizing funds and allocating credit and in forming linkages with the formal financial markets. The findings invariably suggest some means by which the formal banking system can mimic the ICMs and also point out some directions for relaxing banking regulations. For instance, the interlinking of credit with other markets is one way of realizing economies of scope. However, Floro and Geron noted the equity impact of such an arrangement, especially since lenders usually own specific assets which give them a substantial bargaining power.

On exchange rate policy, Pante (1983) evaluated the Philippine experience (1973-81) during the period of generalized floating of major currencies. He noted the relatively weak response of the exchange rate to current account developments, a

situation which can be explained by the ability of the country at the time to more than cover the large current account deficits through foreign borrowings. He also concluded that preoccupation with the nominal exchange rate has resulted in effective exchange rate changes which were not in the direction suggested by the underlying balance of payments developments in many instances.

#### F. Energy

Since the onset of the energy crisis in the early 1970s, energy issues have become an important concern of policymakers in both developed and less developed countries. On the one hand, one can attribute this to the perception by national governments, including the Philippines, of the intensity and pervasiveness of the effects of increased oil prices on the national economy. On the other hand, one can attribute it to the recognition that structural adjustments need to be undertaken to cope with the new circumstances.

In the Philippines, the most immediate response by the government to the crisis was its intervention in the energy industry through the creation of the state oil corporation -- the Philippine National Oil Company (PNOC) -- in 1973, especially in the search, exploration and development of adequate and stable supplies of crude petroleum. The extent of government intervention in the energy industry as well as the chronology of events that led to such intervention and to the setting up of PNOC, are well documented in Makasiar's paper (1988) on the interventionist policies and programs of the government in the energy industry and in his study (1984) on the Philippines' structural response to the energy crisis, respectively. An earlier study by Makasiar (1983) also identified the major determinants of exploration drilling costs. Considering that the government at that time decided to involve itself in the active search for adequate oil supplies, an approximation of the costs required was useful for budgetary allocation purposes.

Through the years, though, policy concerns began to look into other areas in response to new developments. For the 1980s, Alejo (1985) outlined the set of policy and research issues on energy. Alejo also evaluated the energy-economy interaction in the Philippines (1983) using such interaction by a simultaneous equation model which treats both the energy sector and the rest of the economy as mutually interacting through certain linkages and not as separate and independent sectors. In terms of the impact of energy on the macroeconomy, there were various studies which looked into the effects of the oil crisis on areas such as domestic prices and inflation, balance of trade and payments, and GDP growth. For instance, Alejo's study on energy demand management in the Philippines (1985) attempted, among others, to isolate the contribution of oil price increases to domestic inflation. Using a partial equilibrium inflation model incorporating both cost-push and demand-pull factors, Alejo's

paper showed that there is increased sensitivity of domestic prices to externally-generated oil price shocks. Moreover, consumer prices were highly affected by the changes in the price of oil imports. Relatedly, the study by Lamberte et al. (1985) on the government response to the 1983-84 BOP crisis recognized that for 1984, increases in petroleum product prices, together with interest rate and liquidity, were the major contributory factors to inflation.

Meanwhile, Francisco (1983) looked into the potential use of marginal cost pricing principles in connection with electricity pricing. In his electricity pricing study, he observed that the existing tariff structure in the electricity sector was not based on marginal cost pricing principles, hence, net social welfare was not maximized.

The impact of rural electrification projects is another area that has received some attention. An example is Herrin's (1984) impact assessment studies of rural electrification projects (cooperatives) in Misamis Oriental and Cagayan Valley. The studies, especially that on Cagayan Valley, provide not only a regional perspective but also, and more importantly, a link with the macro environment as far as development strategies for the rural sector are concerned.

A significant contribution to the literature on demand for power is the study by Francisco (1988). He estimated the demand elasticities of electricity in the Philippines focusing on the Manila Electric Company franchise area. He argued that setting up a tariff structure for electricity without having a clear idea of the demand behavior of the various types of consumers could result in price signals which may not help in the efficient allocation of electricity. A stable price for electricity over time, he concluded, was needed to provide a clear signal to all the economic players which will, in turn, contribute to a more sustained growth not only in the power sector but also in the entire economy.

On issues concerning the search for alternative fuels or nonconventional energy, studies on improved technologies have continued. In the area of alcogas and cocodiesel technology, a study by Armas and Cryde (1984) evaluated the Philippine alcogas and cocodiesel programs. Their conclusion was that the programs were unattractive from an economic point of view considering the large foreign exchange foregone due to the use of coconut oil in the cocodiesel program and the reduction in government revenues due to foregone taxes.

Finally, considering recent developments like the controversy over the operation of the Philippine Nuclear Power Plant in Bataan, new concerns for policy research have included a study on the economic and financial viability of the power plant as basis for the new government's decision on it (Francisco 1986).

Also, as a means of helping reduce the present inflationary pressure in the economy and maintaining growth, the unorthodox approach of reducing oil taxes may be considered. A recent simulation study by Intal *et al.* (1988) using an input-output model and the PIDS-NEDA macroeconomic forecasting model suggests that a reduction in oil taxes, especially on fuel oil and diesel oil, reduces the price level and leads to higher economic growth rate despite the concomitant increase in money supply due to the rise in the budget deficit brought about by the reduction in oil tax revenues.

#### G. Rural, Urban, and Regional Development

The major work of Pernia, Paderanga, Hermoso *et al.* (1982) in this area investigated the historical, economic, and demographic forces that have shaped the country's urbanization and spatial development, and studied the effects and biases of macroeconomic and growth policies affecting population and economic resources as well as regional and rural policies designed to disperse population and economic activity. More recent studies aimed to further unravel the dynamic relationship between the rural and urban sectors as well as between regions in the country. Others looked into intra-sectoral issues. These include the work of Medalla (1986) on regional growth and intra-sectoral flows; Cariño (1987) on expenditures for infrastructure and social services in two regions of the Philippines; Angeles (1985) on housing policies, and Lamberte and Lim (1987) on the rural financial markets. In similar manner, Herrin and Pernia (1986) studied the factors affecting firm location. While all these studies initially envisioned to capture the major aspects of each issue, they were constrained to limit their analyses as warranted by available data or information.

Concern for the rural sector in the past had usually been reflected in studies done specifically on agriculture. Poverty studies also touched on the rural sector in general as the majority of the poor people in the country are in the rural areas. However, focus on the rural economy and its potential as a source of growth has remained weak. Enthusiasm about rural development issues, although prominent during the 1970s, actually resurfaced only recently, especially in line with the government's efforts to redress massive poverty. Efforts to raise productive activities in the rural sector are being given priority with the end in view of "putting the last, first" in government programs. Some studies have been conducted along these lines. For instance, the study on rural linkages tried to examine the contribution of linkages to productivity in the rural areas, in addition to the traditional inputs of land, capital and labor (Ranis, Stewart and Reyes 1989). Another study which analyzed the structure of rural household income (Reyes 1987) suggested the importance of nonfarm activities as sources of rural income.

#### H. Poverty and Equity

The concept of poverty is multidimensional. Accordingly, it is important for the government to have an appreciation of who are the poor, where they are, what makes them poor, before it can adequately formulate and effectively implement policies, programs and projects that specifically target the poor. The challenge for research along these lines has been to come out with studies that describe the economic and non-economic measures with which the poor are identified, the processes through which the measures can be derived, the determinants of poverty, and the consequences of poverty. Likewise, there is a need to synthesize the link between aggregate poverty and pockets of poverty, thereby requiring macro- or sociologically-oriented studies to be supplemented by micro studies. Relatedly, there is a need to be able not only to classify or define the poor by some objective criteria but also to measure the perceptions or subjective conditions of the poor.

A review of earlier studies on poverty done by Alburo and Roberto (1980) pointed out the importance of studies that would: (a) measure a household size threshold which determines poverty lines according to family or household size; (b) present a model which specifies a poverty index capturing sectoral elements such as a nutrition intervention program and a scheme that determines the importance of the sectoral elements on poverty; (c) provide an understanding of the economic setting -- rural vs. urban -- of poverty; and (d) assess the impact of development programs in helping reduce poverty.

A number of studies addressing some of those concerns have since then been completed (particularly in the period 1983-88). The pioneering work on poverty measures in the Philippines by the Social Indicators Project of the Development Academy of the Philippines (DAP) which eventually led to the adoption of official poverty targets must receive special mention. Mangahas followed up with various studies on the measurement of poverty and equity (1983) and on perception indicators of economic well-being (1984a) and further on the relevance of poverty measurement to food security policy (1984b). A more micro approach to the poverty issue is provided by a collection of case studies on Philippine poverty in the Visayas region (Abad, Cadelina, and Lopez-Gonzaga 1986). The case studies focused on four different poverty groups, namely: (a) artisanal fishermen in Iloilo Province, (b) sugarcane workers or sacadas in Negros, (c) scavengers in Cebu City; and (d) lowland migrant swiddeners in Balinsasayao Forest in Negros Oriental. They give an insider's view of the social and demographic characteristics of the poor, their living conditions, way of life, problems and aspirations.

Some studies looked into the impact of some government development strategies and intervention programs intended to help distribute wealth to the poor and reduce poverty. Among these



were: (a) Costello's study (1983) on economic development and income inequality in Northern Mindanao which considers the regional dimension in the efforts by government to increase levels of economic development in order to reduce income inequality (Costello asserts that, contrary to expectations, field studies of individual rural villages in Northern Mindanao show that, instead of reducing income inequality, development programs very often have the opposite effect); (b) Aguilar's study (1983) on the agrarian proletariat in the rice-growing areas of the Philippines which cited government projects, population pressure, uneven industrialization, etc., as conditions that give rise to an agrarian proletariat and which discussed the causal factors associated with increasing landlessness; (c) Feder's book (1983) which described how agricultural development strategies adopted by the government, (e.g., green revolution, land reform) have raised levels of poverty and unemployment to unprecedented heights in Asian societies like the Philippines due to the capitalistic nature of these strategies; (d) Mendiola's study (1983) on urban land reform in the Philippines which cautioned the government on its approach to urban land reform, claiming that adopting it on a piecemeal basis will only defeat the objective of effecting equalization of land rights; (e) Guerrero's review (1985) of welfare issues affecting landless coconut farmers; and (f) Castillo's book How Participatory is Participatory Development? (1983), whose short term, interim verdict on the overall assessment of various government approaches to people's participation in development programs is that benefits from participatory development have yet to substantially accrue to the poor.

An Inter-Agency Working Group on Poverty alleviation based at NEDA was convened in 1986 to come up with estimates of poverty incidence for 1985 both for the whole country and for various regions. The study entitled "The Estimation of the 1985 Poverty and Subsistence Threshold and Incidences" adopted the level of ₱2,381.00 monthly family income as the official poverty line for the country and estimated that around 58.9 percent of the country's population fall below this poverty line. Corollary to these estimates are the perception surveys on the quality of life regularly conducted by the Social Weather Stations and Ateneo de Manila University, discussed in Mangahas (1987). The latter looked into the social context of rural poverty and reviewed the trends in "social weather watching" in the Philippines.

As the Comprehensive Agrarian Reform of the Philippines is being put in place, Quisumbing (1987) examined the profile of the rural poor, the poverty incidence by regions, and the land tenure patterns as they affect poverty incidence. Her study also cited the policy directions for the Philippine rural sector under the Aquino government and examined the policies which would provide incentives for an efficient and equitable pattern of land distribution in the country.

Providing an urban dimension to the poverty issue is Solon's study (1988) on the urban poor. Essentially a micro study on the urban poor in Metro Manila, Cebu City and Davao City and on employment in the underground economy, the study nevertheless differs from previous micro case studies in that it succeeds in presenting a macro overview of urban poverty and, thus, in putting the entire study in perspective.

# I. Population and Human Resource Development

## 1. Population Policies

Three broad themes pervade the area of population research in the Philippines. The first involves basic demographic studies focusing on the levels, distribution, trends, and patterns of population; the second looks at socioeconomic-demographic interactions; while the third entails action- or program-oriented research. Herrin (1981) provided a comprehensive review of population literature along these themes up to the late 1970s.

The volume of studies on population in recent years has remained substantial with increasing research work on action- and program-oriented research. Studies on various demographic aspects continue. Papers published by the Population Institute of the University of the Philippines from 1983 to 1988 (notably de Guzman 1988) provided estimates of fertility levels from the 1983 National Demographic Survey and the 1986 Contraceptive Prevalence Survey. Indirect estimates of mortality indicate a deceleration in the decline of mortality rates in recent years (Cabigon 1985; Zablan 1988). Internal migration has become increasingly urbanward (in contrast to the pre-1960s when it was frontier-bound) with metropolitan Manila as the dominant receiving area (Engracia and Herrin 1984; Nguiagain 1985). In recent years, however, urban areas of other regions apart from the National Capital Region have started to become important receivers of migration inflows (Feranil 1988).

The observation of Herrin that studies on consequences of demographic trends were inferred from simulation exercises using economic-demographic models of different specifications rather than actual consequences still holds true. Canlas (1988) tried to incorporate demographic changes in analyzing levels and growth rates of output through its effect on consumption and savings. The socioeconomic and demographic aspects of education were addressed by Paderanga (1988). Herrin (1987) reviewed Philippine demographic development and public policies from 1970 to 1985, pointing out that the former has been influenced by various indirect and unintended impacts of economic policies and by the failure of population-related programs to have large direct impacts on demographic trends.

On the other hand, Guerrero (1987) looked into population processes and Philippine social institutions, notably the impact of fertility and migration on the family, political institutions and the church. An excellent review by Pernia (1987) examined demographic trends in Asian developing countries including the Philippines and pointed out that development policy in the medium- and short-term should pay more attention to such concerns as employment generation, rural-based development and employment in small industries, investments in education, health, housing, and infrastructure, and food supply. He suggested that, for the long run, development policy should continue to be concerned with fertility issues as greater numbers of women come into reproductive age.

## 2. Housing Policy

Three major studies were undertaken in this area in recent years. The first study by Angeles (1985) looked into the Philippine housing market and critically examined housing policies and their impact on the market. The study pointed out that (1) a significant backlog in housing remains; (2) current low incomes and the rapidly increasing cost of housing effectively constrain acquisition; and (3) the existing finance system for housing does not reach the target population.

A more recent study (CRC 1987) similarly estimated the housing backlog and reviewed the government housing program, particularly the housing finance program. It recommended a socialized interest rate policy for housing credit and the provision of an interest rate subsidy.

Sluyk and Turner (1986) did a comparative analysis between the Philippines and Korean housing finance. They noted that there is a strong government involvement in housing credit in the Philippines relative to Korea. They concluded that formal financing dramatically increases a household's chances of living in acceptable housing, regardless of income. They therefore argued for the expansion of loanable funds by integrating housing finance with broader capital markets.

Finally, Solon (1989) examined the impact of housing policy on health. Using primary data gathered from a survey in Metro Manila and Cebu, his study revealed that housing components that significantly contribute to the health status of the occupants are those provided at the community level - the presence of garbage, sewerage, clean water, etc. The study therefore argues for a stronger sites and services component in the government's housing program.

## 3. Health Policy

Although there has been a recent upsurge in research on health policy and development, past studies in this area have been limited.

Studies on health status indicate similarities in health problems between those of the Philippines and those of the developing world, with respiratory, gastro-intestinal and other infectious diseases, together with nutritional deficiency, constituting the major causes of death and mortality (Herrin and Bautista 1986). Estimates on mortality show a continuing decline from 1948 to 1980, although at a decelerating rate; and improvements in life expectancy at birth and in child survival rates (Flieger 1981; Cabigon and Concepcion 1984; Esclamad, de Guzman and Engracia 1984). Similar improvements are observed with morbidity rates although what is alarming is that they appear to have been increasing since 1980. Malnutrition is one of the leading causes of death and undernutrition among preschoolers in particular has been on the rise after 1982 (Florentino 1986).

Studies looking at the proximate determinants of specific health outcomes are limited. These include an analysis of (1) determinants of child mortality (Martin et al. 1983); (2) the nutritional status of preschoolers (Popkin 1980); and (3) breastfeeding and maternal and child health care factors (Zablan 1986). Studies looking at socioeconomic determinants of health status include Popkin (1980) and Evenson (1980). Ching (1986) studied the demand for health care and health service utilization. Various studies have also analyzed the health care delivery system such as Cariño (1982) and Bautista (1987). Available studies relating socioeconomic determinants directly to health outcomes include Herrin and Paqueo (1985), Herrin (1984), and Martin et al. (1983). A most recent study by Solon (1989) examined the impact of housing on health status.

The last group of studies on health looked at the consequences of health outcomes. Paqueo (1985) examined illness and child educational performance and Herrin (1985) analyzed perceptions regarding disease impacts.

#### 4. Education

A major study (Gonzalez and Sibayan 1988) reviewed Philippine experience with respect to bilingual education. The study found out that bilingual education in the Philippines had not significantly contributed to (1) the enhancement of learning content, (2) anchorage to country, (3) linguistic nationalism, and (3) the dissemination of national language. However, bilingual education had not resulted in the deterioration in the educational system. It further concluded that genuine bilingualism was attained by good students in Grade 6 and argued for greater flexibility in higher levels of schooling. It recommended the provision of more training to private and public scholars in the design and implementation of bilingual education programs, the enhancement of teacher training, and the provision of better materials for bilingual education.

Paderanga (1987) studied socioeconomic and demographic aspects of Philippine education examining, in particular, the determinants of schooling attainment. His finding showed that regional location has no systematic effect on the level of schooling. The effects of household characteristics were insignificant. Of the community characteristics, only the rate of return to elementary education and child's wage rate were found to have a significant effect. Of the teacher and school quality variables, only expenditure on personnel per student significantly affects the level of schooling.

#### 5. Employment

Recent research on employment policy in the Philippines has been limited. As pointed out by Tidalgo (1983), past studies tended to exhibit a strong bias towards an examination of the determinants of employment as well as of the impediments to greater employment, with the dominant view that unemployment, through the years, has been abetted greatly by government policy. She points out that employment literature has not really gone beyond viewing the unemployment situation as merely the result of imperfections in the structure of relative prices arising from "incorrect" policies. She argues for a macro-framework or systems approach to plan and policy formulation to be able to assess the employment impact of government policies as well as for a fuller treatment of the underemployment dimensions of the problem.

A subsequent study (Tidalgo 1984) examined the Philippine labor market with particular focus on labor underutilization, incomes, international migration, and government intervention in the labor market. It pointed out that government planning has placed greater emphasis on growth and has not systematically incorporated its impact on the labor sector. The need to integrate labor concerns in the current structural adjustment and economic reforms being undertaken was also raised.

More recent studies examined more fully the Philippine labor market as well as the impact of government policies in its development (Reyes et al. 1988; Tidalgo 1988). Manasan (1988) provided estimates of the employment and wage effects of the structural adjustment program. In similar manner, the impact of trade liberalization on employment was examined by Medalla (1985). Various studies looked into the dimensions of the Philippine labor market: non-agricultural wages and their relative structure (Sanchez 1988), labor contract emigration (PDPR 1988); rural employment and poverty (Reyes 1987); and evaluation of government self-employment schemes (Quieta 1988).

#### J. Macroeconometric Modelling

A review of research studies (Bautista 1988) on econometric modelling in East Asian developing countries including the Philippines classifies them into two types. The first is

composed of macroeconomic models wherein the economy is described by a system of statistically derived behavioral relationships and identities of economic variables. The second involves the use of models based on the Walrasian multi-sectoral general equilibrium structure.

With respect to the first type, major works in the Philippines include the short-term model for forecasting monthly inflation (Mariano 1985) and the model based on leading indicators by Icamina (1987) and Cuyegkeng (1988). The Mariano model consists of a single-price equation which explains the dynamic behavior of the consumer price index in terms of its past values and cost-push and demand-pull factors. Icamina's work centers on forecasting the quarterly gross domestic product and its components based on 31 leading indicators. A semestral model of the Philippine economy (Danao and Montes 1985) consisting of five main sectors -- real, balance of payments, monetary, government, and price -- provides semestral forecasts of major macroeconomic variables. A macroeconomic model with an explicit treatment of the energy sector (Alejo 1983) was developed mainly for the analysis of energy-related policies. An annual macroeconomic model for the Philippines (PIDS/NEDA) was also developed to derive annual and medium-term forecasts and conduct policy simulations. The core of the model is the real sector block which centers on the determination of output and its expenditures and production components, prices, and employment and wage. Similar works include Velasco (1984) and the dissertations of Montes (1984), Yap (1985), and Lim (1985). Finally, an economic-demographic model by Paqueo et al. (1984) attempts to integrate population-development interrelationships in analyzing and forecasting macroeconomic and other variables. This had been further refined by Orbeta (1988). A macroeconomic model that uses the structuralist approach was developed by Lim (1985). It traces the impact of IMF prescriptions on inflation.

Work on CGE models is more limited and fairly recent. They have been used to simulate the effects of tax reform (Habito 1984) and trade policy interventions (Clarete 1984). Bautista (1984) uses a 10-sector CGE model to examine the repercussions of alternative liberalization measures in agriculture and foreign trade regimes.

The use of models in government planning and policy work has been increasing over time. For instance, NEDA has been using the Mariano model for forecasting monthly inflation, updating and reestimating it as new data become available. Similarly, the PIDS/NEDA annual econometric model has been used extensively for the medium term projections in the government's Five-Year Philippine Development Plan as well as for assessing various economic and financial policies such as those under the government's economic adjustment program with the IMF and the impact of current economic reforms on key macroeconomic variables (e.g., employment).

Current efforts in the area of macroeconomic modelling include reestimations and improvements of the models. In particular, these include greater model disaggregation, strengthening of linkages among model components, link modelling among Asian countries, and development of shorter-term models such as quarterly models as the data system permits. Initial efforts have been made in constructing a regional econometric model (Danao 1988). In the case of CGE models, finer disaggregation of production sectors and construction of the financial sub-sector are currently being done.

### III. CURRENT AND EMERGING POLICY ISSUES

When the Aquino government took over in 1986, it was faced with two principal tasks on the economic front, namely: (1) in the short term, to turn the economy around from its downward slide in 1984 and 1985 as quickly as possible; and (2) in the medium and long term, to achieve sustainable economic growth. After three years, it can be said that the first task has been completed, with real GNP growing by 5.7 percent and 6.7 percent in 1987 and 1988, respectively, unemployment dropping from 11.2 percent in 1987 to 9.7 percent in 1988 and underemployment contracting from 33.6 percent in 1987 to 32.6 percent in 1988. These were achieved with relative internal and external stability.

Economic recovery did not in any way come easy, what with destabilization attempts launched by extreme rightist and leftist elements. Furthermore, it appears at this point that it is less difficult to achieve economic recovery than to sustain it. Firstly, the basic problems of poverty, unemployment and underemployment and inequitable distribution of income and wealth remain to be substantial and pose a tremendous challenge to future development efforts. Secondly, it becomes even more critical at this stage to sustain the momentum of economic policy reforms in such areas as trade policy reform, agrarian reform, privatization, deregulation and tax reform. The question is whether the government can resist pressures from various interest groups to ease up on the implementation of these reforms, if not to totally abandon them. Finally, as the economy went back on the growth track, the need for external financing due to the heavy debt service burden became more acute, since the achievement of the country's growth rate targets in the next few years depends considerably on its ability to fill an external financing gap of about \$6.5 billion from 1989 to 1992.

These considerations indicate the policy issues confronting Philippine policymakers and planners today. In general, these issues revolve around the interrelated questions of how economic growth can be accelerated and sustained while maintaining internal and external stability, how productive employment

opportunities can be expanded, how poverty incidence can be reduced and how the benefits of development can be distributed more widely and equitably. Among the issues that stand out are those in the areas of external debt management; macroeconomic management, in particular, fiscal and monetary policies and exchange rate policy; population and human resource development; natural resources and environmental management; regional development, rural development and decentralization; those which relate to specific sectors such as agriculture and industry; issues involving official development assistance (ODA), specifically, its effectiveness; and science and technology policy.

#### A. External Debt Management

The Philippine external debt burden certainly is the hottest policy issue today. The country, which is one of the most heavily-indebted developing countries, now has a total debt of over \$28 billion and an estimated debt service to exports of goods and services ratio of 31 percent in 1988 after rescheduling. In 1987 and 1988, its net resources outflow totalled \$2.1 billion per year. For the period 1989 up to 1992, the net outflow of resources is estimated to come to about \$2.5 billion annually. <sup>2/</sup> Unless the debt problem is resolved, sustainable growth will be difficult, if not impossible, to achieve. Unfortunately, there is no permanent solution in sight to the external debt problem, and such solution would require both national and international actions.

With regard to Philippine government policy on the external debt, while there is unanimity on the pursuit of a "growth-oriented" external debt management strategy, there are divergent views on how to operationalize it. One approach is to seek more rescheduling cum "new money." This strategy envisions that the growth of the economy and exports would outpace the growth of external debt. The problem here is that the emergence of an unfavorable external environment such as an increase in foreign interest rates and protectionism, could undermine such strategy.

The other approach proposes to reduce the current level of external debt through such means as debt condonation or write-off, selective debt repudiation, etc. Such strategy implies debt-burden sharing between the debtor government and foreign creditors. But needless to say, this strategy requires a strong will on the part of the government, cooperation among highly indebted countries and assistance from governments of foreign creditors.

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This period covers the remaining four years of the current Medium-Term Philippine Development Plan, 1987-1992.



## B. Macroeconomic Management

The external debt problem has increased the importance of overall macroeconomic management, in particular, the pursuit of the "appropriate" fiscal, monetary and exchange rate policies. The close interrelationship among these policy areas has been highlighted by the debate among Philippine government authorities about the effects of the Central Bank's intervention in the money market on domestic interest rates, and thus, on the exchange rate. On the one hand, government planners have argued that the Central Bank is actively pushing interest rates upwards through its forays into the money market to prop up the exchange rate. They point out that further increases in domestic interest rates could jeopardize private investment targets in the country's Development Plan. On the other hand, the Central Bank asserts that it is not their actions which have resulted in higher interest rates. The issue appears to be still unsettled within the Philippine government. Nevertheless, the fundamental issue is the appropriate exchange rate policy under conditions characterized by a relatively large trade deficit and dwindling gross international reserves.

In the specific area of fiscal policy, the major issue is the public sector deficit which stood at about 2.6 percent of GNP in 1988. This manifests the need to (1) increase the country's tax effort, which is one of the lowest in Asia; (2) raise the efficiency of governmental operations, especially in the provision of infrastructure and basic social services; and (3) rationalize and improve the operations of government-owned and controlled corporations. This also calls for a more vigorous effort to dispose of the so-called "nonperforming assets" transferred to the national government. With respect to taxes, the value-added tax which was adopted last year needs to be closely monitored and evaluated. Finally, the method of financing the budgetary deficit remains to be a major issue. The current financing program of the government seems to suggest that much of the budget deficits will have to be financed by borrowing from the domestic market. The crowding-out effect of this financing program could hinder the growth of private investments which are envisioned to lead the economic expansion in the next few years. Thus, a thorough analysis of the optimal mix of financing the budget deficits seems in order, given the growth targets of the government.

### C. Population and Human Resources Development

The importance of the issues involving population and human resource development is aptly captured by Herrin: <sup>3/</sup>

Recent information in the area of health, nutrition and basic education in the face of continued rapid population growth, however, point(s) to a disturbing scenario that unless the currently unfavorable trends in these human resource indicators are reversed and placed on a path of sustained improvements, the quality of human resources would further deteriorate in the 21st century at precisely the time when higher human resource productivity is needed to support a much larger population at higher standards of living.

The growth rate of the Philippine population remains high (about 2.4% per year) and if this is not sufficiently moderated, it will tend to exacerbate the problems of poverty, unemployment and underemployment as well as require higher expenditures on such basic social services as health and education. The government has formulated a population policy and has clarified the institutional responsibilities for the implementation of the National Family Planning Program. The problems here now are more of the need for a stronger and better coordinated program as well as the need for the full backing of the government. The role of research in this area would be more in the nature of evaluation of program impact and cost-effectiveness, and the quantification of population-development linkages.

In the area of health services, preventive medicine using the primary health care approach is being given greater emphasis. As regards curative medicine, the government has yet to draw the line between health services that should be provided by government and those that could be effectively dispensed by the private sector. De-emphasizing specialization among publicly-owned hospitals and public health services at the tertiary level is worthwhile considering. Among the issues involving various aspects of the health system that need to be looked into are the following: (1) alternative financing schemes, e.g., feasibility of employing Health Maintenance Organizations (HMOs) on a wider scale; (b) evaluation of the role of public hospitals versus private hospitals and examination of the different means of promoting the growth and viability of private hospitals; and (c) assessment of the impact of the Generic Drug Act of 1988.

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<sup>3/</sup> Herrin, "Human Resources Development in the Philippines: Policy Issues and Research Directions." Paper prepared for ADB, July 1988, p. 2. Mimeographed.

In education, the policy of providing free high school education is currently being implemented. There is also the observed tendency on the part of the government to take on an increasing role in the provision of tertiary education. The question here is whether it is better for the government to work towards qualitative improvements in secondary and tertiary education rather than towards quantitative expansion at these levels. <sup>4/</sup> For instance, it might be more worthwhile for the government to consider the reallocation of the national budget for education away from quantitative expansion of tertiary schools towards scholarship and assistance to existing private and public educational institutions.

#### D. Natural Resources and Environmental Management

There is now an increasing appreciation of natural resource and environmental management. The currently-held view is that economic growth and conservation can go hand in hand. The challenge therefore is to clearly define and institute policies that would promote the creation or utilization of modes of industrialization and urbanization that would not significantly violate or alter the natural environment. That the natural resource sector has received the highest increase in the 1989 government budget is a clear signal that the present government places great emphasis on the management of natural resources and the environment.

However, large financial resources are only one ingredient in the effective management of natural resources and environment. Proper policy environment is also needed. In this regard, it seems that the policy on resource tenure and enforcement needs to be reviewed. For example, the present tenure for logging concessions is not attractive enough for initiating forest renewal. Pricing policy also needs to be finetuned to achieve the best balance between exploitation and conservation of natural resources, and, at the same time, maximize government revenues. Experience suggests that undervaluation of natural resources has resulted in overexploitation and substantial loss of revenues to the government.

#### E. Regional and Rural Development; Decentralization

The strategy set forth in the current Philippine Medium-Term Development Plan, 1987-1992, is a rural-based, employment-oriented development strategy. Moreover, regional development and decentralization are envisioned to go hand in hand with this strategy. The issues that have surfaced involving these areas include: (a) the impact and cost effectiveness of various rural development programs, including the so-called "integrated area

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Ibid., p. 25.

development" programs and projects; (b) the inequity in the allocation of government expenditures by region and locality, necessitating the formulation of more transparent, objective and equitable criteria for allocating funds among regions and sub-regions; and (c) how local government units can be encouraged to strengthen their local resource mobilization activities.

#### F. Sectoral Policies

The policy concerns in the agricultural sector can be grouped into four areas, namely: <sup>5/</sup> (1) macroeconomic and sectoral policies; (2) agricultural credit; (3) rural poverty and employment; and (4) linkages between agriculture and non-agriculture.

On macroeconomic and sectoral policies, there is a need to examine the effects of such policies as those in tax and tariff, exchange rate, interest rate, pricing, etc., on the agricultural sector. On agricultural credit, the major policy concerns include questions on how to reduce transaction costs in agricultural lending, how to make rural financial institutions viable, and how to encourage savings and investments in the rural areas.

On rural poverty and employment, the effort should gradually shift from an analysis of the nature and character of rural poverty to an assessment of the impact of rural development programs and projects on the rural population, with the end in view of identifying more cost-effective approaches to poverty alleviation and employment generation. There is also a need to look at the pattern of wealth distribution in the rural areas and at related issues on agrarian reform. The Comprehensive Agrarian Reform Program (CARP) requires huge financial resources. Its impact on the financial markets will definitely be profound. For instance, the issuance of Land Bank bonds to help raise funds for compensating landlords may raise the domestic interest rate. In addition, the highly-liquid feature of the Land Bank bonds may generate more inflationary pressures. Furthermore, the role of the rural financial markets needs to be clearly defined since the CARP will result in the elimination of the landlord-tenant relationship. All these suggest that, aside from looking at CARP from the equity point of view, its macro and microeconomic impact must be clearly examined.

On the area of linkages, several questions can be addressed: What are the demands of rural households of different income classes for various food grains, nonfood grain agricultural

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F. Pante, Jr., "Challenges in Philippine Agriculture: The Role of Research." Paper prepared for the meeting of the Policy Advisory Council of the Australian Center for International Agricultural Research, 24-25 February 1988, pp. 16-17.

products, and non-agricultural products and services? What are the saving and investment rates of rural households? What are the supplies of, and demand for, rural labor? Information on these and other related aspects of the rural economy are needed to determine the direct and indirect effects of technological innovations and of various government policies on agriculture and the rural sector.

In the industrial sector, the policy issues that need to be addressed include: (a) evaluation of the tariff reform and import liberalization programs, with the end in view of fine-tuning as well as identifying the next steps that need to be taken; (b) evaluation of the impact of "progressive manufacturing programs" such as the "progressive car manufacturing program;" and (c) review of the government's privatization program.

#### G. Effectiveness of ODA

More and more donors as well as recipients of official development assistance (ODA) are now raising questions about the effectiveness of ODA in helping developing countries achieve their development objectives. The problem in this regard is the lack, if not absence, of impact evaluation of major programs and projects. Impact evaluation is quite different from what is known as ex-post project evaluation, in the sense that the former goes further in terms of the effects of a project on the intended beneficiaries. Though not that simple and inexpensive to conduct, it would be helpful if further work can be done in the area of development program or project impact assessment.

#### H. Science and Technology Policies

Research and analysis of science and technology policies in the Philippines have been largely neglected in the past. However, as the country proceeds in its development, the critical role that science and technology plays emerges. As a result, there has been growing interest in a better understanding of the interplay between science and technology and development.

Given the paucity of studies carried out in this area, the initial research on science and technology should provide an analysis of the record of technological development in the Philippines, focusing on the three production sectors: agriculture, industry and services. This analysis should include: the impact of technology on economic growth and development; the types of technology transferred along the different dimensions (embodied or disembodied, and autonomous, adaptive transfer or pseudo-transfer); the choice of vehicle of technology transfer and the reasons for such choice; the shortcomings in the development of technology and the possible reasons for these; and a description and an analysis of a preferred state for the science and technology sector and the definition of selection

criteria consistent with this goal. At the same time, research should look into the role of government in the development of science and technology in the Philippines. This should focus on the direct role of government within the framework of the innovation chain and its indirect influence via macroeconomic policies. Corollarily, the role of the private sector in the development of science and technology also needs to be examined. Finally, research could be conducted on more problem-oriented and more specific issues such as the impact of biotechnology on developing countries and an assessment of some proposals to alleviate the present state of science and technology in the Philippines.

#### V. CONCLUDING REMARKS

This paper has broadly surveyed the policy-oriented research on Philippine development in the last five years and outlined the current and emerging policy issues in the country.

A substantial amount of policy-oriented research has been undertaken on Philippine social and economic development in the last five years, many of which have had a profound impact on the policies adopted by the present government in the Philippines. However, the basic problems of poverty, unemployment and underemployment and inequity remain, reviving old issues and raising new ones. Policy-oriented research can certainly help in addressing these issues by clarifying the situation, explaining interrelationships, anticipating and pointing out bottlenecks, identifying options and their implications, and ascertaining the efficacy of policies, programs and projects.

It is hoped that this paper has helped, albeit in a small way, in providing an idea of the policy-oriented research efforts in the country in the last few years and in generating interest among researchers and research institutions on some of the current and emerging policy issues which need to be addressed in order to facilitate the country's achievement of a sustainable, broad-based and more equitable development path.

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